

Didactic Unit
for
Primary Education
YEAR 2

THE EARTH SPINS AROUND THE SUN

UNIT: THE EARTH SPINS AROUND THE SUN

OBJECTIVES

1. To recognise the Sun as a star and the Earth as a planet that orbits the Sun.
2. To know that the Earth spins around its own axis and around the Sun.
3. To know the relationship between day and night and the Earth's movement around its axis.
4. To demonstrate that seasons exist because of the tilt of the Earth
5. To identify the four seasons of the year and their main characteristics.
6. To learn the months of the year

CONTENTS

Concepts

- The Sun is a star, the Earth is a planet
- The Earth spins around its own axis. Night and Day.
- The Earth orbits the Sun. The Seasons
- The Earth takes one year to go all the way around the Sun
- We have seasons because the Earth is tilted and because it orbits around the sun.
- There are four seasons in a year: spring, summer, autumn and winter.
- Night, sunrise, midday, sunset

Procedures

- Undertaking an experiment to observe the spinning of the Earth around the Sun.
- Text comprehension and analysis.
- Drawing up diagrams and activities to assimilate information.
- The Sun and the Earth chant
- Song: The Earth goes around the Sun.
- Rap: the Sunrise
- Chant: Months
- Song: Months

Attitudes and Values Education

- A positive appreciation of the energy sources the Sun provides us with.
- Fostering curiosity towards knowledge of the universe.

Reading Skills

To develop prior information about a reading from its illustrations and the introductory paragraphs.

To ask questions about the text.

Formulating questions about the fundamental issues of the text.

BASIC COMPETENCES

To use words related to the Earth and its movements to improve communication. (**B.C. 1**)

To analyse facts to explore scientific research (**B.C. 3**)

To understand and integrate information by means of activities and diagrams. (**B.C. 4**)

To be aware of one's learning capacities to obtain a satisfactory performance. (**B.C. 7**)

To take a position in favour of alternative energy sources. (**B.C. 8**)

Basic Competences: Linguistic communication competence (B.C. 1); competence in knowledge and interaction with the physical world (B.C. 3); competence in dealing with information and digital competence (B.C. 4); learning to learn (B.C. 7); personal autonomy and initiative (B.C. 8).

EVALUATION CRITERIA

1. To recognise the Sun as a star and the Earth as a planet that orbits the Sun.
2. To know that the Earth spins around its own axis and around the Sun.
3. To know the relationship between day and night and the Earth's movement around its axis.
4. To know that seasons exist because of the tilt of the Earth
5. To know the four seasons of the year and their main characteristics.
6. To know the months of the year

METHODOLOGY

In this unit we learn that the Earth moves. It spins around itself, giving rise to day and night, and it spins around the Sun, giving rise to the seasons of the year. We also learn that the Moon spins around the Earth. We investigate how the forces of gravitational attraction act between the Sun and the Earth. Lastly, we come to understand why we cannot see the stars during the daytime. Furthermore, throughout the unit we highlight the importance of the Sun as a source of energy.

This unit is presented using an introductory picture showing the Solar System, the Sun and the Earth, as well as other stars that can be seen in the night sky.

The unit concentrates on several aspects, some of them are:

- We use the first activity to work on attention, and more specifically in searching for similarities and differences.
- The second activity in session 3 sounds out the students' prior knowledge. We ask our students to remember the difference between day and night by answering two questions about the print.
- The chants, songs and pictures help us to have a clear understanding of the contents.

The first pages explain the Earth's spinning and movement, day and night, dawn, midday and nightfall, the seasons of the year and the phases of the Moon.

It also proposes an experiment aimed to learn both movements of the earth. The spinning on its own axis and the rotation around the sun. By following the instructions and answering the questions, students will verify that the Earth spins around the Sun, always following the same orbit due to the existence of the force of gravity.

TIMING

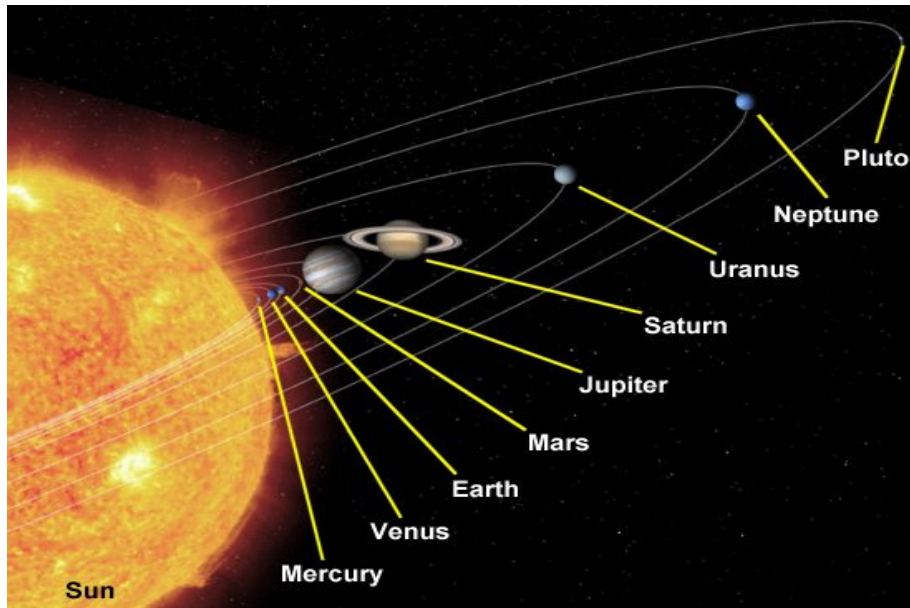
This unit has 6 sessions and an estimated duration of 15 days.

ADDITIONAL MATERIAL

Audio CDs. Flashcards CD-ROM: The Universe. Posters: The Earth moves, The Moon. Mixed-Ability worksheets, Reinforcement and Extension, Evaluation worksheet

SESSION 1

Activity 1 Look carefully at the picture:



Activity 2 Reading:

The **Sun** is a **star**. The **earth** is a planet, as well as Mercury, Venus, Mars, Jupiter, Saturn, Uranus, Neptune and Pluto. All these planets orbit (go around) the Sun. We can't see star during the day because the light of the Sun is too bright. The sun is made of gas.

Activity 3 Questions:

We Foster the children's curiosity on astronomy with questions like... *What is "spin"? Let's all spin (TPR). This is what the Earth does all the time. Which is the closest planet to the Sun? Which is the furthest? Which planets are about the same size as the Earth? Which are different? Is Mercury as big as the Earth?*

Activity 4 The Sun and the Earth chant:

(Transcript)

"The sun is a star, The sun gives us heat and light, We live on the earth.

The Earth is a planet, planets go around the sun".

SESSION 2

Activity 1 Working with the Flashcards:

We may teach the children: “We live on the Earth. The Earth is a planet. Planets go around the Sun. The sun is a star and is too hot. It is made of gas. The Sun gives us heat and light If the Earth was closer to the sun we would get burnt and die”.

Write the sentences:

The Sun is a star ~~The Sun gives us heat and light~~ We live on the Earth
The Earth is a planet Planets go around the Sun



The Sun gives us heat and light .



_____ .



_____ .



_____ .



_____ .

Activity 2. Song: “Around the Sun”

Transcript:

“The earth goes around the Sun, around and around and around the Sun. The moon goes around the Earth, around and around and around the Earth. The planets go around the Sun, around and around and around the Sun. The Earth goes around the Sun. The Moon goes around the Earth. The Earth and the Moon and the planets go around the Sun, around and around the Sun. Around and around the Sun. Around and around the Sun”

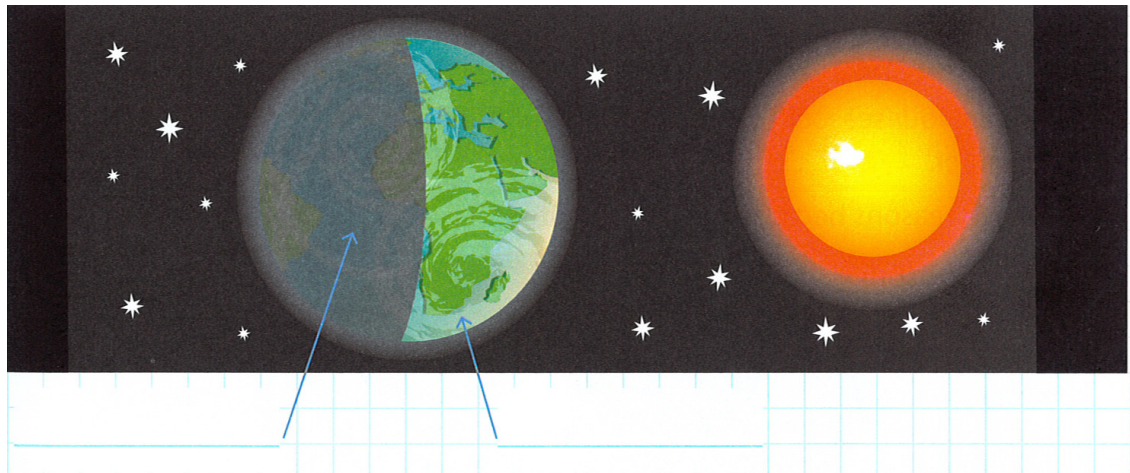
SESSION 3

Activity 1. Experiment:

All the students in the classroom are the Sun. They can bring to class a flashlight or torch. The teacher plays the role of the Earth. Teachers may use a globe. This is to show the students that this planet goes around the sun, so we start moving around all the desks in the room. We also teach them that the earth spins around its own axis. The teacher makes two different movements simultaneously: spinning around ourselves and the other spinning around the pupils' desks.

The teacher tells the students that the rotation on himself makes the night and the day because of the reflection of the sun on each side of (ourselves) the Earth. This is movement number one.

Activity 2. Write Day or Night in its right place



Activity 3. Rap: Sunrise

Transcript:

"The sun rises in the East and sets in the East, Sunrise, Midday, Sunset".

"The sun rises in the East and sets in the East, Sunrise, Midday, Sunset".

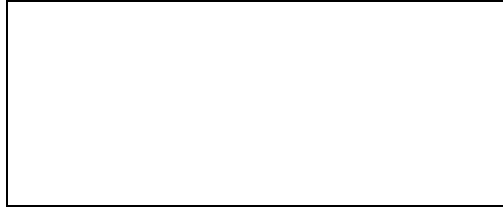


Activity 4. Sing and draw: Sunrise, sunset, East, West

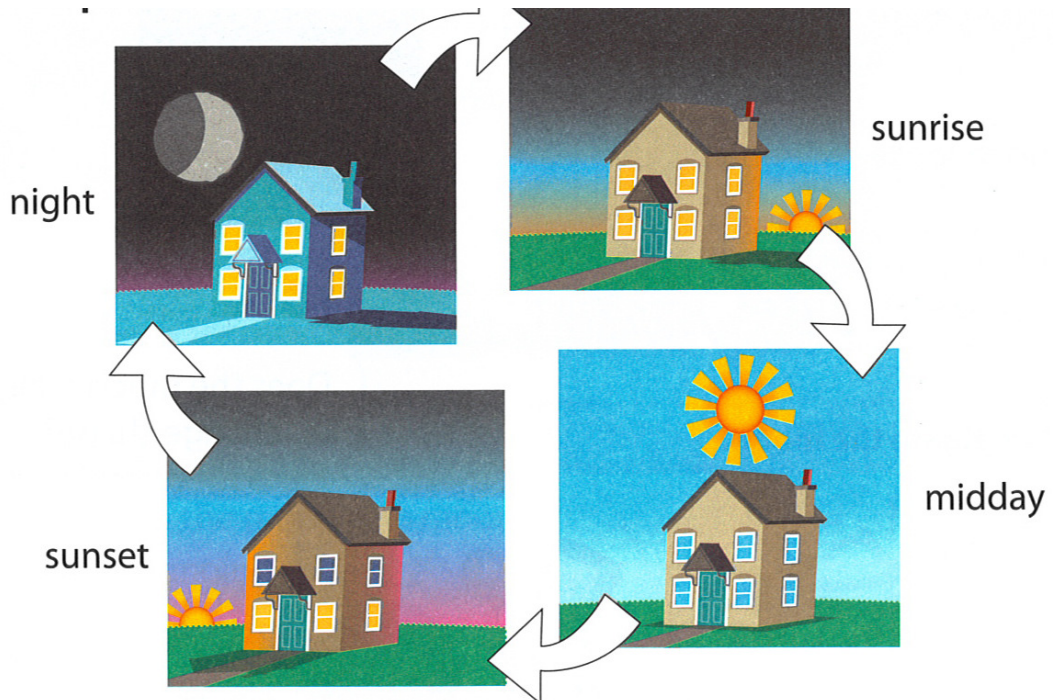
(Transcript):

Draw : morning, sunrise, evening, sunset

Early in the morning,
you can see sunrise
The Sun rises in the East,
And sets in the West.



Activity 5. Listen and point:



SESSION 4

Activity 1

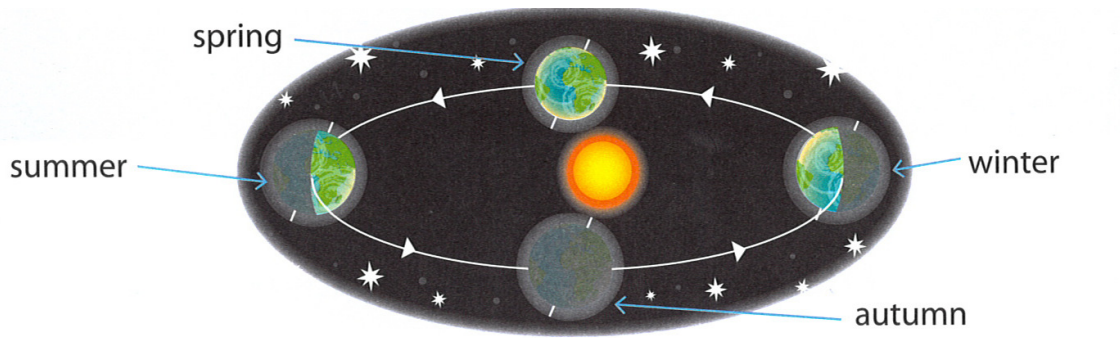
Now the teacher focuses on movement number 2 while rotating on himself/herself. This is to show the students that the Earth also spins around the sun (the students with their flashlights or torches). This creates the seasons

The Earth goes around the Sun.

The Earth takes one year to go all the way around the Sun.

There are four seasons in a year: spring, summer, autumn and winter.

We have **seasons** because **the Earth** is **tilted**.



Activity 2

Answer these questions:

Why do we have night and day?.

Because the earth spins on its own axis

Why do we have seasons?

Because the earth spins around the Sun and its tilted

What are the names of the seasons?

The seasons are Summer, Autumn, Winter and Spring

Activity 3

Complete the sentences:

The earth takes _____ to spin **on its own** axis creating _____ and _____.

The earth takes _____ to spin **around the Sun**.

SESSION 5

Activity 1. Song: " The seasons " (TPR activity)

Lyrics:

In the Summertime I like to go to the beach

And swim in the deep blue sea.

In the Autumn time I like to look at the trees

And see all the leaves fall down

In the winter time I like to snuggle up tight

Snuggle up tight in bed

In the springtime I like to sit in the sun

And see all flowers grow.

Note: (There are many ways to explore this song and the rest of the songs and chants in this didactic unit, therefore we may do this activity in more than one session)

Activity 2

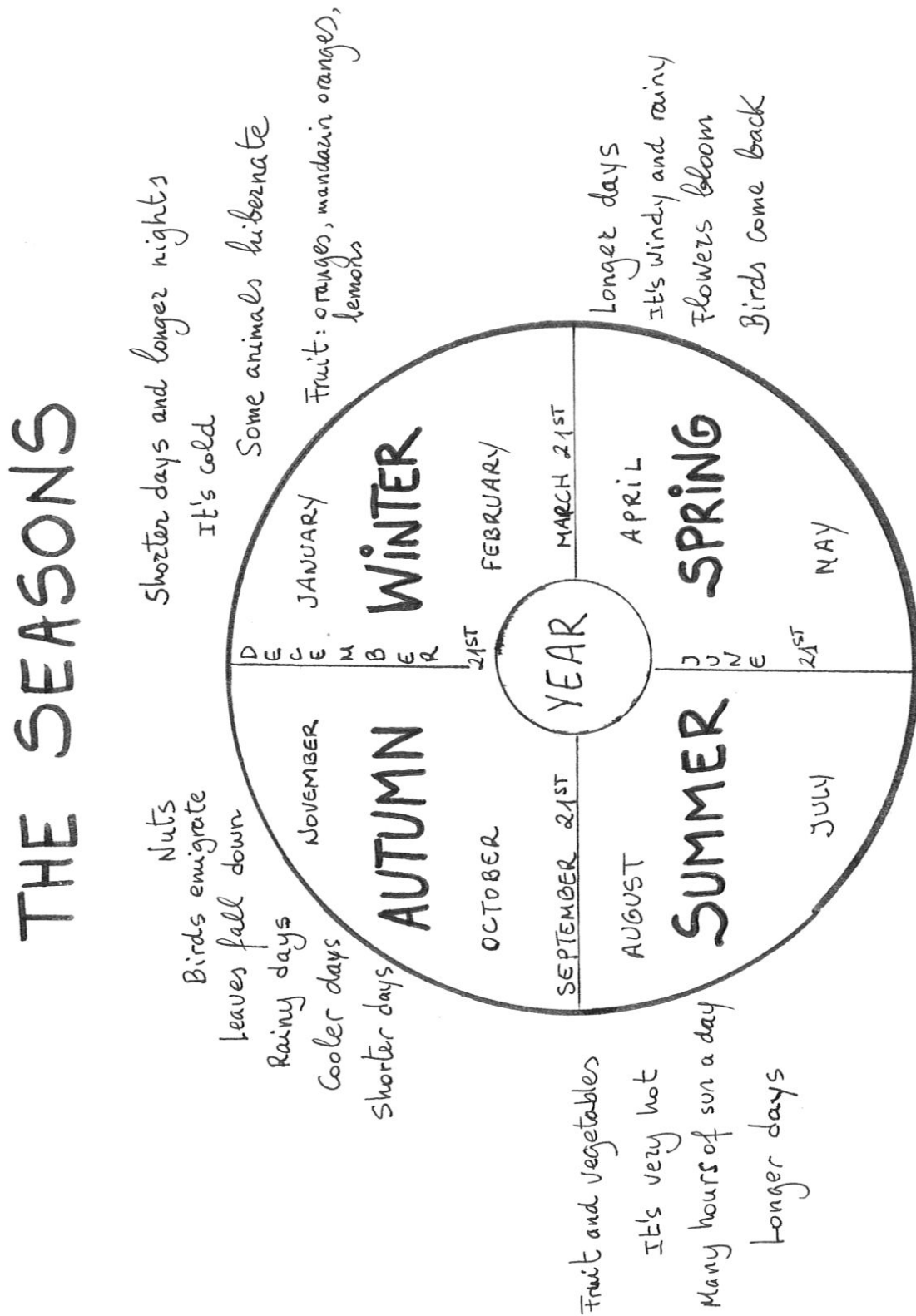
Main characteristics of the seasons

This exercise can be carried out either with a reading, a listening or just telling the children all the facts. Students draw four grids. Each of them for each season. Students draw:

1 AUTUMN October November December Nuts, birds emigrate, leaves fall down...	2 WINTER January February March Short days, long nights, It's cold,
3 SPRING April May June Longer days, windy and rainy, ...	4 SUMMER June July August It's hot, Fruit and vegetables, longer days

SESSION 6

Activity 1. Once they learn the facts they can do and colour a diagram like this one:



Activity 3. Listening

The Sun makes the seasons

In Summer, the Sun is high in the sky and the days are long.

In Winter, the Sun is low in the sky and the days are short.

Activity 4. Write the name of the seasons:

summer ~~spring~~ winter autumn



spring

Activity 5. Say the Months Chant. Draw

Transcript:

"There are 30 days in September,

April, June and November.

All the rest have 31,

Except for February alone,

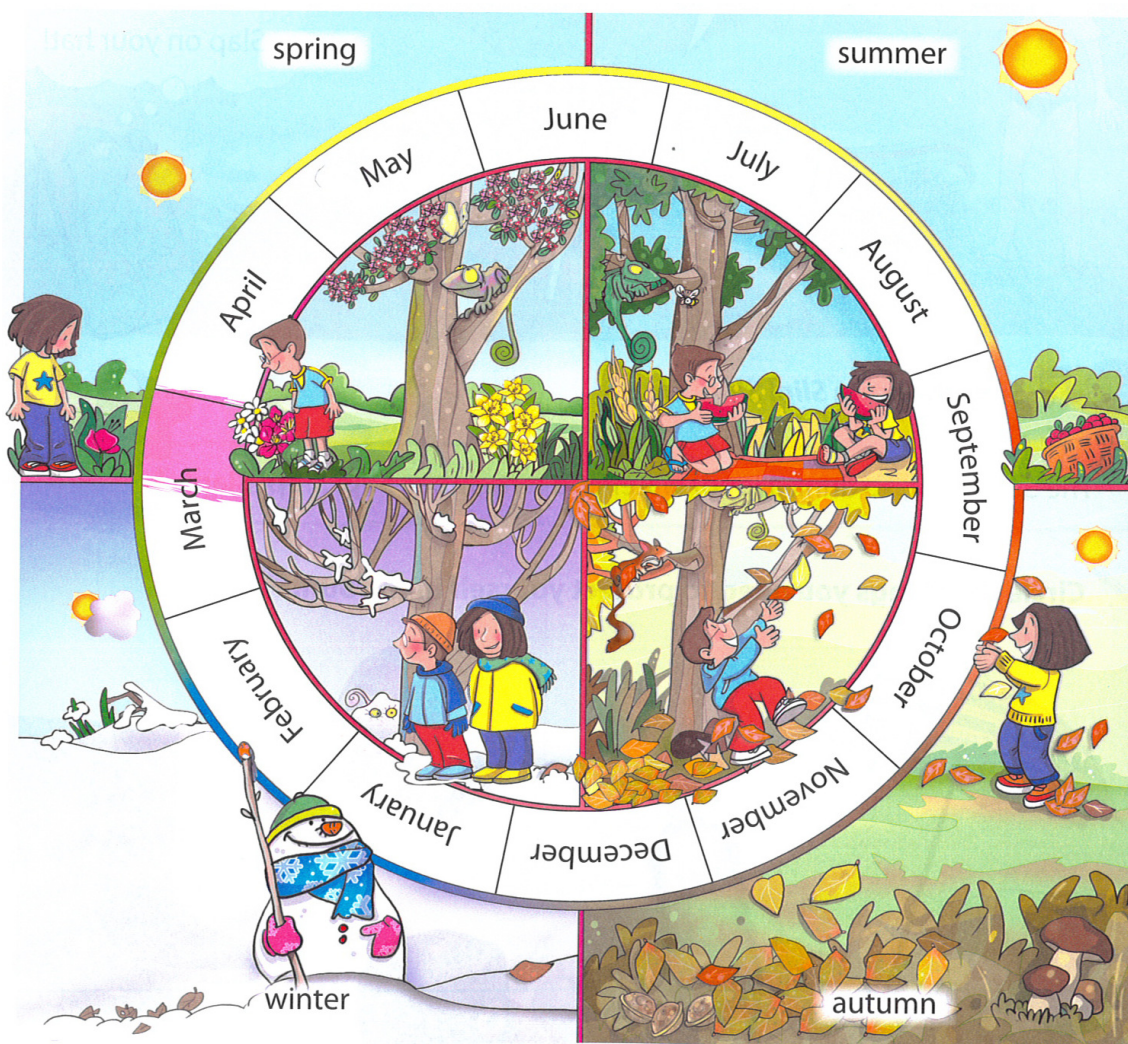
And that has 28 days clear,

And 29 in each leap year."

Draw the chant:

A large, empty rectangular box with a black border, intended for a student to draw the chant.

Activity 4. Look at the pictures. Listen and point:



Activity 5. Colour the months in the picture above

Activity 6. Listen and read. Write the seasons:

March – June

spring



In spring, things start to grow.
The weather starts to get warmer.
Many baby animals are born in spring.

June – September



In summer, the Sun is high in the sky.
The weather is hot. The days are long
and bright and we can go to the beach.

September – December



In autumn, the leaves fall from
deciduous trees. The weather gets
cooler. It can rain a lot.

December – March

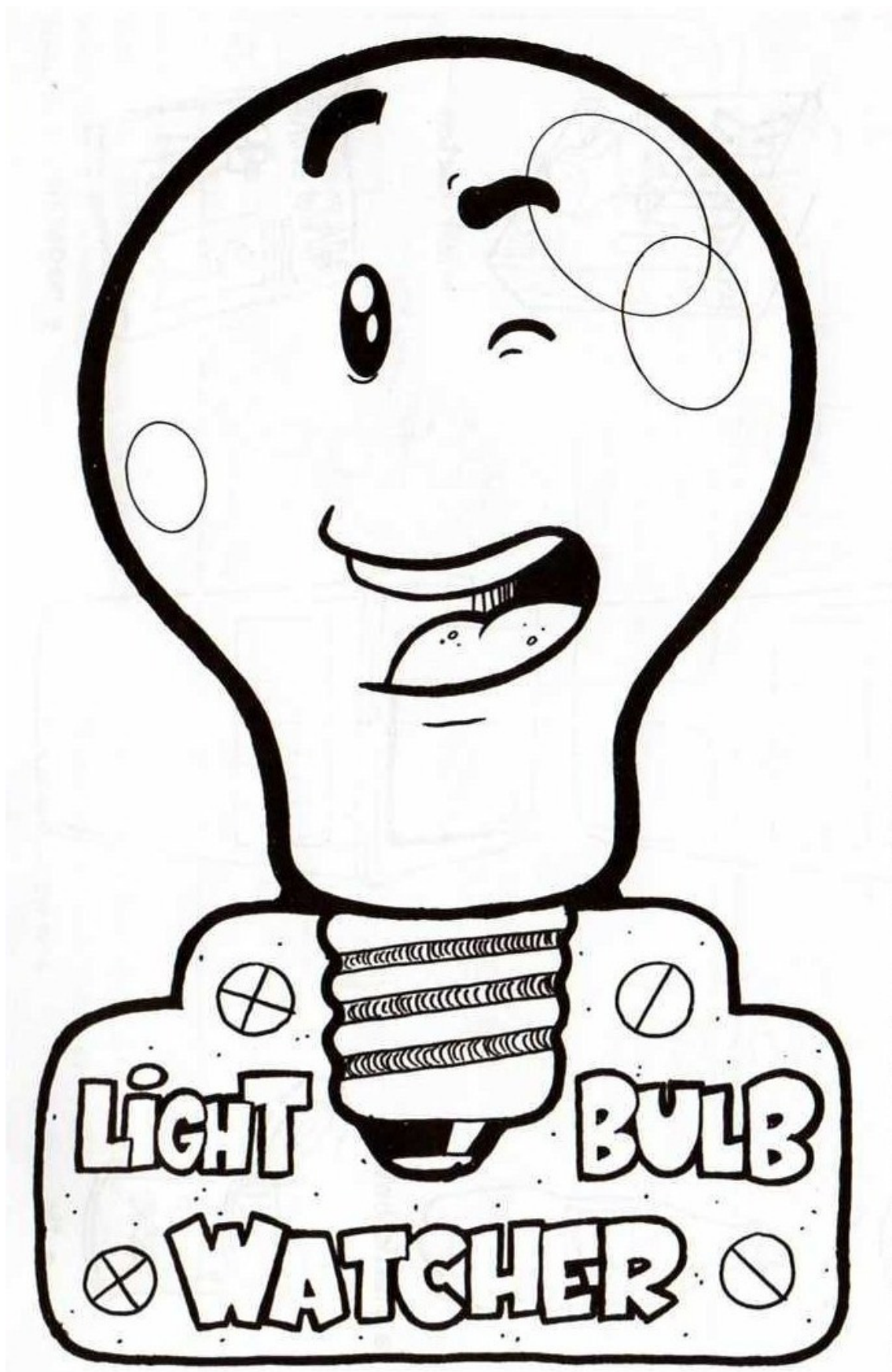


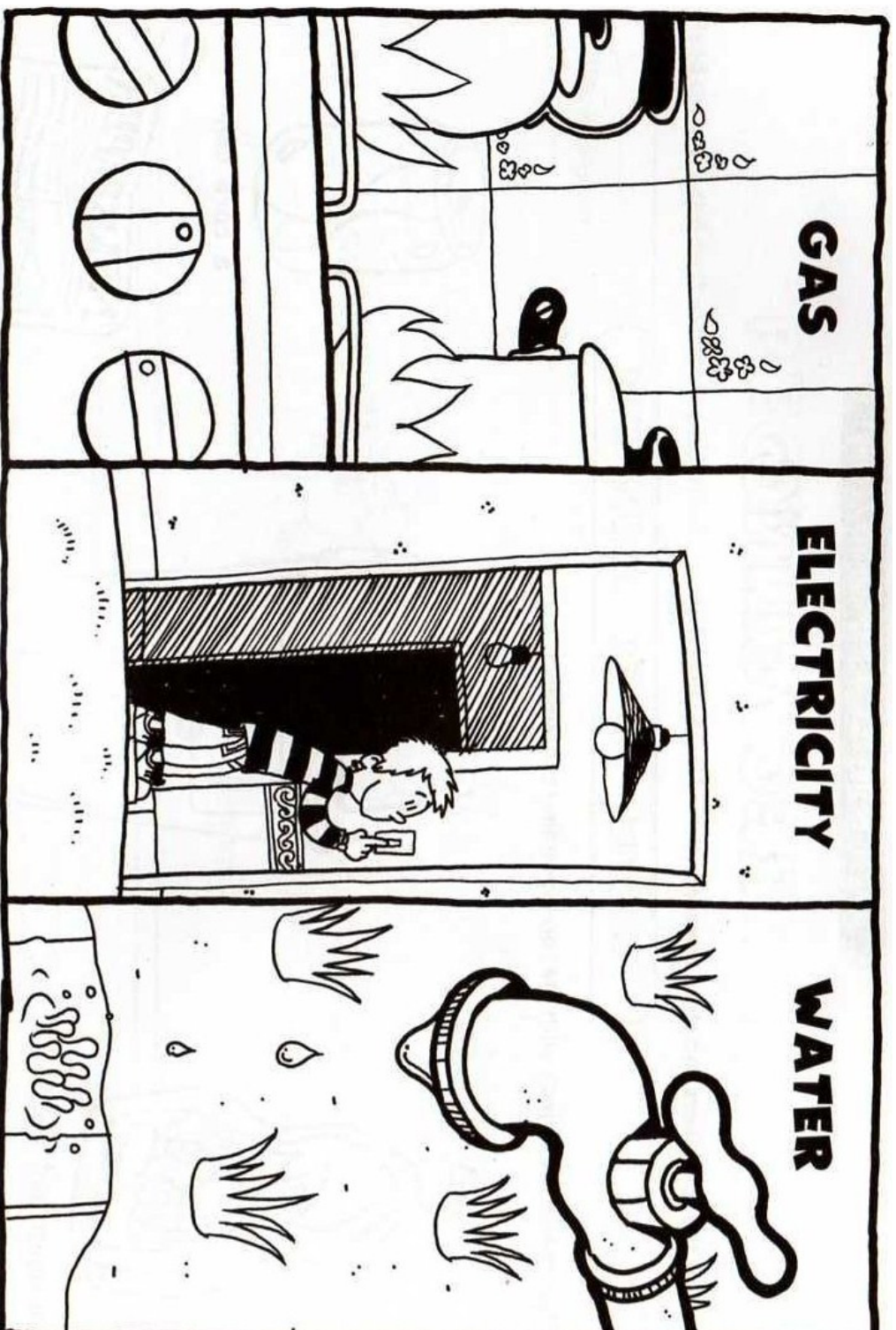
In winter, the days are short and the
Sun is low in the sky. The weather is
cold. Sometimes it snows.

Activity 7.

Answer: What is my favourite season? Why? Complete the sentence

My favourite season is _____ because _____





**OUR RESOURCES ARE LIMITED.
LET'S LOOK AFTER THEM!**